

ESTABLISHED IN 1861

THE AMERICAN BEE JOURNAL

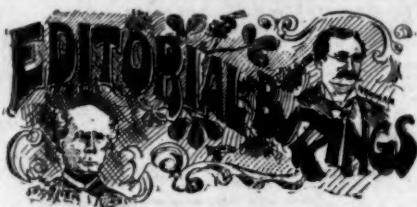
OLDEST BEE-PAPER IN AMERICA

GEORGE W. YORK,
Editor.

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—TO BEE-CULTURE.

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"Thou Cheerful Bee, come freely, come,
And travel round my woodbine bower ;
Delight me with thy wandering hum,
And rouse me from my musing hour.
Oh ! try no more those tedious fields,
Come taste the sweets my garden yields ;
The treasure of each blooming vine,
The bud and blossom all are thine."

Successful bee-keepers take bee-papers and keep posted in their business, wisely says an exchange.

This Number is almost a convention number, but you will find much of interest in the reports of proceedings. Sisters Harrison and Stow say some real sweet things in their essays. Read them.

Have You Learned anything of value to the pursuit during the past season ? If so, why not write out your experience, and thus help some other member of the fraternity ? The BEE JOURNAL columns exist for the very purpose of recording in permanent form just such valuable information as you may now be able to give. Let us hear from you.

Bro. Hutchinson, in the October number of the *Review*, makes this kindly and congratulatory reference to the recent improvements in the appearance of the BEE JOURNAL :

The AMERICAN BEE JOURNAL, the "old reliable," the oldest bee journal in the country, shows no sign of decrepitude. It comes out with a brand new full-page illustration on its front page, and at the head of each department of the paper is a characteristic illustration. Such signs of prosperity and enterprise are very pleasant to see in a deserving journal like the AMERICAN BEE JOURNAL.

Poor Seasons come to the farmer and horticulturist as well as to the bee-keeper. In fact, there is no business in the world that has not its "ups and downs," at some time or another. You may be passing through the very kind of an experience that is best for you, if you could but realize it.

The future in many a man's life has looked dark and full of evil forbodings, but when he reached that dreaded time, what seemed like insurmountable barriers, or "lions in the way" of his progress, had vanished, and an apparently beclouded future proved to be radiant with the smiles of sunshine and happiness. Don't be discouraged, but rather look about you and draw inspiration and encouragement from the fact that others whom you may see and know are worse off than yourself.

Riches and prosperity do not always bring to their possessor the greatest

peace and joyfulness of heart. Then, again, there are other "riches" that invariably bring a wealth of happiness and contentment to those who are so fortunate as to possess them.

It pays to cultivate the habit of looking on the bright side of things instead of continually on the dark side. Seldom is one so poor and miserable but that he can find some one else who is poorer and more unfortunate. Prepare yourself during dull and discouraging seasons in life in such a manner that when prosperous times are at hand, you may be the better able to take full advantage of them, and thus be prepared to swing through unfavorable times thereafter, should such appear again. Have hope. Have courage. Have faith!

A Large Photograph of the apiary of Mr. S. B. Strader, of Bismark, Ills., has been sent us by Mr. S. It is beautifully situated in an opening near a delightful grove, which gives it a restful and pleasing effect. We have placed the picture in the BEE JOURNAL album, along with similar aparian views.

Mr. Strader says: In a private letter, which we received after writing the above paragraph, that the location of the apiary is in a valley between two hills shown in the picture. The hives face to the east, and at the north side of the yard the honey-house is shown, which was built for the purpose of keeping bees on the hillside.

When Renewing your subscription to the BEE JOURNAL, please send the names of those around you who have bees, and we will send them free sample copies. Then afterward you can get them as new subscribers, for which work we offer some excellent premiums in each number of the JOURNAL. While thus helping yourselves, you will also be helping others. Why not begin now?

Be Sure to read offer on page 611.

Magnitude of the Queen-Trade.—In the October *B.-K. Review*, the editor requested queen-breeders to report the number of queens they had reared the past season, and here is what they report, our friend, Mrs. Atchley, heading the list:

Atchley, Jennie, Floyd, Tex.	2,800
Bankston, C. B., Thorndale, Tex.	700
Compton, W. A., Lynnville, Tenn.	120
Case, J. B., Port Orange, Fla.	745
Doolittle, G. M., Borodino, N. Y.	712
Frazier, W. C., Atlantic, Iowa.	150
Green, J. A., Dayton, Ills.	296
Golden, J. A., Keinersville, O.	77
Hicks, C. M., Hicksville, Md.	175
Kildow, A. L., Sheffield, Ills.	141
Leininger Bros., Ft. Jennings, O.	800
Lockhart & Co., F. A., Lake George, N. Y.	590
Michael, J. F., German, O.	300
Moore, J. P., Morgan, Ky.	680
Mott, George, Spurger, Tex.	250
Nebel & Son, Jno., High Hill, Mo.	1,180
Pike, D. A., Smithburg, Md.	337
Quigley, E. F., Unionville, Mo.	297
Thies, Chas. H., Steeleville, Ills.	508
Trego, S. F. & L., Swedona, Ills.	949
Total	11,715

Clipping Queens' Wings.—A friend of the BEE JOURNAL has kindly called our attention to a clear case of "copying" an article from a book, and then claiming it as original. He says:

I wish to call you attention to an article purported to be written for the AMERICAN BEE JOURNAL, on page 534, which is an exact copy of page 235 in the "A B C of Bee-Culture," 1891, entitled, "Shall We Clip the Queen's Wings?" and also part of a contribution by Mrs. A. L. Gould, on page 236 of the same edition. By comparing the two you will easily see that I am right.

Although I do not subscribe for the BEE JOURNAL, I read it with a friend, and as soon as I read the above-mentioned article, I knew I had seen it somewhere else. Cannot you give Mr. Root credit for that article? It is a clear case of plagiarism.

Certainly; we are glad to give the proper credit, though it is a little late. It shows that Bro. Root's "A B C of Bee-Culture" is highly prized, when any one will attempt to claim as original something taken from it, for most literary people like to put out a good thing for the reading public. We are sorry we did not notice the plagiarism before publishing the article.

Chicago's Great Week.

Chicago wants the Earth, and week before last it looked as if she were going to get what she wants. The city put on gala dress. Huge sky-scrapers, some of which are as homely as they are tall, came out dressed from sidewalk to flag-staff in the gayest of colors. The buildings of the city caught the infection of the hour and of the populace, and appeared attired for the occasion. Terra cotta and red, white and blue vied each with the other for the best seats in the synagogue. The price of 15,000,000 pounds of honey were spent in covering the nakedness of inanimate building material. How many pounds of honey went down the throats of voters in the form of "old rye" diluted, while this bunting waved, deponent sayeth not.

It was a great week for Chicago, and the world and his wife who were her guests. Notables stepped on each other's toes in street and hotel corridor. Generals and diplomats and cabinet officers were more numerous than the festive summer drones in the average apiary.

On Friday, Oct. 21, the buildings of the World's Columbian Exposition were dedicated. The representative of the AMERICAN BEE JOURNAL was in attendance, to see if perchance the orators of the day would by chance drop into some poetical or figurative reference to wax foundation or beeology. But the honey-mouthed Chauncey Depew and the fiery Kentuckian—Henry Watterson—did not thus digress. Into the largest building on earth our reporter carried his quill and note-book in vain.

There, with nearly thirty acres of good-natured humanity struggling for the possession of 75,000 chairs, our representative waited and watched for the hour of opening. When it did come, nearly 100,000 white handkerchiefs waved the Chautauqua salute, and for an instant the forest of faces became a field of white clover. At this instant it was estimated that one-eighth of a

million of people were in the great "Manufacturers and Liberal Arts" building. But at this point the reporter dropped his quill, for fear that soon some distant reader might intimate that he (the reporter) lived in Chicago.

The Dairymen's Association

of Illinois have issued their 18th annual report—a book of about 240 pages, bound in cloth. Through the kindness of Mr. W. R. Hostetter, of Mt. Carroll, Ills., the Secretary of the association, the BEE JOURNAL has been favored with a copy, which contains the proceedings of the convention held at Kewanee, Ills., on Feb. 24, 25 and 26, 1892.

Mr. J. M. Jenkins, Wetumpka, Ala., we learn through a good friend of ours, is to be married "in a few days" to a most excellent lady of Little Rock, Ark. We wish to congratulate them in advance upon their evident mutual good fortune and glowing prospects.

Convention Notices.

IOWA.—The Eastern Iowa Bee-Keepers' Association will meet at Maquoketa, Iowa, in the City Hall, on Dec. 14th and 15th, 1892. All are invited. FRANK COVERDALE, Sec. Welton, Iowa.

NEW YORK.—The next meeting of the Allegany County Bee-Keepers' Association will be held at Mrs. H. Green's, in Angelica, N. Y., at 2 p.m. on Monday, Nov. 28, 1892. All bee-keepers are invited to attend. Friendship, N. Y. H. L. DWIGHT, Sec.

MISSOURI.—The 7th semi-annual convention of the Missouri State Bee-Keepers' Association, will be held at the Court House in Independence, Mo., on November 17, 18, and 19, 1892. An interesting and well-arranged programme has been prepared, and we extend a cordial invitation to all bee-keepers to meet with us in this very important convention. W. S. DORN BLASER, Sec. Higginsville, Mo.

WISCONSIN.—The Southwestern Wisconsin Bee-Keepers' Association will hold its next annual meeting at Boscobel, Grant Co., Wis., on Jan. 13 and 14, 1893. All members of the Association are requested to be present as the following officers are to be elected: President, Vice-President, Secretary, Assistant Sec., and Treasurer. Blank Reports will be sent each member, for the year 1892, with instructions. A cordial invitation is extended to all bee-keepers, and especially to those that would like to join with us. Each member will be notified at least one month before the meeting. Boscobel, Wis. EDWIN PIKE, Pres.



Winter Quarters for Bees.—Mr. B. Taylor, of Forestville, Minn., in the *Farm, Stock and Home*, recently gave the following advice regarding the preparation for bees in winter :

The time is about here when it will be in order to put the bees in their winter quarters. In this climate, where the temperature is likely to fall ten or more degrees below zero, some kind of protection to the hives is necessary to insure safe wintering. We find a good cellar is cheapest and best. Bees may be wintered on their summer stands, with outside cases set over the hives, and a space of three or four inches left between them, filled with dry sawdust or chaff.

The vegetable cellar is all right, where there is room to set the hives in some quiet corner, and keep them dark by hanging old carpets, quilts or wrapping-paper around them. The hives should be raised from the bottom-boards by making a rim of two-inch strips, the size of the hive, and placing between the hive and bottom-board, leaving an entrance the entire length of the hive open at all times, as bees will not do well when so confined to their hives.

The best cover for the top of hives that we have tried is strawboard building-paper cut in pieces one inch larger than the top of the hive, and kept in place by tacking some small strips of wood around the edge to keep it tight. This will keep the heat from escaping, and give all surplus moisture a chance to escape by drying through the single thickness of paper. There should be no solid cover on the paper, as that would cause the paper to retain moisture.

No colony should be put in quarters with less than 20 pounds of sealed stores. Prepared for winter in this way, there is but little danger of loss in the Northwestern States.

The first of November is the proper time to place bees in the cellar in the North

The Ant and the Bee are amusingly yet profitably compared in their spheres of life, in an article by Rev. A. B. Austin, who wrote it for the *Epworth Herald*. With the exception of the error made in "sex," especially when speaking of the bee, we are inclined to believe that the writer has about the correct idea of what he undertakes to say. As "variety is the spice of life," and as bee-keepers want to know what is being written about their favorite "pet," we here present Mr. Austin's views, without further comment:

THE FAVORITISM OF THE FLOWERS—A SOCIAL STUDY.

The ants have a grievance. They claim that there is nothing fair in the distribution of the world's honey. If "there were any equity stirring," the toilers of the insect world would get the largest share of the sweets of life. As it is, they get nothing. They know no greater delicacy than honey, and no greater rarity.

Nor is their grievance groundless. If the truth were told, the ant is the victim of unjust discrimination. In point of industry he is not inferior to the bee: only in the circumstance of birth. Both are suitors for favors in the gift of the flower. But the ant finds every door shut in his face, while the bee is welcomed with open arms. All this happens, of course, in accordance with Nature's laws. Talk after that about her justice! Here is an instance of the baldest class legislation. Who dare say, as matters now stand, that all insects are equal before the flower?

Let me cite an instance of partiality: Darwin tells us that the beauty and the fragrance of the flower are not for our benefit, as we, in our lordly self-conceit, are accustomed to think, but are simply a tinted and scented note of invitation to Rev. Mr. Bee to call and tie a knot at his earliest convenience. Mr. Primrose is in a quandary. The object of his affection lives only a stone's throw away, but neither can stir an inch from the other. They are so near, and yet so far. A happy thought strikes them. They will engage the services of Rev. Mr. Bee as a go-between. The functionary joins their hands, and receives from each a walletful of honey as his fee. It is a short ceremony, and easily performed, and yet on the strength of

it, Bee is immensely popular with the flowers; and flowers, you know, are at the very top.

But because Ant neither can nor will do such jobs, he is in bad odor with them. He has no time for it. He is a common carrier, and none the worse for that; the world's carrying is as important as its marrying. If flowers want their knots tied, they must get somebody else to do it—he is not ordained. Still, he argues, and certainly with some show of reason, that this ought not to be used against him. Had he been born with wings he might have been as serviceable in this direction as Bee. No one ought to be condemned for the limitations of birth and capacity.

But the flowers are too absurd to listen to reason. The poor working ant receives from them nothing but lofty contempt and disheartening rebuffs. Think of the obstacles thrown in his way when he sets his heart on honey. The first plant he attempts to climb has leaves which encircle the stalk at their base, forming a cup, which the dew and the rain keep full of water. Ant encounters their breastwork from below, and clambers bravely over it only to find himself at the brink of a lagoon he cannot navigate. Meanwhile Miss Blossom, "in her moated grange," looks down upon him with patronizing disdain, as if to say: "You should have known your place. Between me and you there is a great gulf fixed."

The next plant has turned its leaf cup upside down. It meets him in his tollsome ascent like a raised umbrella, the underside of which is so slippery he falls off every time he reaches it. At this provoking juncture Bee comes sailing by, lazily humming, "There's room at the top." So there is—for the fellow who can fly.

A third rebuff is more tantalizing still. The flower permits the ant to come within sight of the honey, but there confronts him with an abattis of bristles as fatal to an attacking party as the Austrian spearpoints to Winkelried.

Length of limb and tongue is as useful in the acquisition of honey as length of purse in the acquisition of money, and many an ant has had to reluctantly abandon a cherished enterprise for lack of capital. Indeed, he seems doomed to do business in a small way. If he attempts to rise, he is frowned upon as an interloper; if, by any chance he should succeed, he would still be only a *parvenu*. What wonder if he concludes that this world is a hard place for the plodder;

or if his soul rankle with hatred for the flowers "who have this world's goods, and behold their brother in need, but shut up their compassion from him!"

Still a word must be spoken in apology for the flowers. To see grounds of extenuation in them requires no greater stretch of charity than Burns showed when he saw hope of amendment in the devil. It is too much to expect unanimity in them. They are but flowers, and know no better than to confine their favor to those who can do them favors in turn. Being but flowers they are not troubled with compunctions of heart when they cut the fellow who walks and cut the fellow who rides. Being but flowers they see nothing wrong in allowing a suitor to advance almost within reach of the prize before they crush him with a negative. What might they not do if they were human!

The Song of the Golden-Rod.

I have set my lights on a thousand hills,
I've illumined field and lane,
To guide you out of the summer-land,
Into autumn's grand domain;
For the days are sweet, in this sunny realm,
They shine with a glory, all;
So, come, I will show you, oh, weary ones,
The way to this kingdom of Fall!

There are asters waiting beside the brooks,
There are grapes in the sunny dells,
And a crimson light in the apple trees
Where the wren's soft choral swells;
There are nuts grown tawny with many suns,
In this kingdom grand and free,
And they all shall be yours, my weary friend,
If you seek this realm with me.

Ah, ye who have borne the summer's heat
Through its weary hours—oh! see—
I have set my lights on a thousand hills,
To guide you by lanes or by lea,
Safe into the wonderful kingdom of Fall,
All glowing with color and light;
Where the harvester's song lulls the weary to
rest,
And an Eden-land bursts on the sight!
—Good Housekeeping.

The Globe Bee-Veil, which we offer on page 613 of this number of the BEE JOURNAL, is just the thing. You can get it for sending us only three new subscribers, at \$1.00 each.

Read our great offer on page 611.



CONDUCTED BY

Mrs. Jennie Atchley,

FLOYD, HUNT CO., TEX.

Producing Honey and Rearing Queens

1. Is it profitable to combine honey-production with queen-rearing in the South?

2. Is it profitable to produce comb honey in the South?

Thorndale, Tex. C. B. BANKSTON.

I think it will pay to combine honey-production with queen-rearing, provided you do not run either too extensively, so that your time might nearly all be taken up with the one, and the other be neglected. But you might make both profitable, and then you have "two strings to your bow," so that if one should fail, you would have the other to fall back on. Don't you see? I don't think it sound policy to bestow all our labors upon one occupation, but mix up a little, and we have more chances to get a living, and the result will be less failures.

I am a poultry fancier, but my whole time has lately been taken up in the apiary, so my poultry must go; but I produce some honey, and raise our vegetables, and enough corn and oats for my cows and horses; in fact, we usually raise our bread and meat at home, then we are more sure to have it.

2. Yes, I do think now that it will pay to produce comb honey in the South.

Bee-Keeping in North Carolina.

I do not think we have many intelligent bee-keepers in North Carolina. I have not been keeping bees very long for myself, but I have been with them all my life, as my father kept bees, but he kept them in the old box-hives, and robbed them once a year, and that is about all he ever did to them. If they died, it was all right, and if they lived it was so, too. However, he generally

kept a great many, and got a great deal of honey, even if he did not give them any attention. Most bee-keepers in North Carolina to-day are keeping them just as he did.

For the past two years I have been trying to post myself by reading the different works on bees, such as "Cook's Manual," "Doolittle on Queen-Rearing," etc. I have about 18 colonies in Simplicity hives, and thought I would get some pay for the work and attention I had given them this season, but I have not taken any honey at all, I might say; and, besides, almost all of my bees are now in very poor condition, and will require a great deal of care and attention to keep them alive until spring.

Just across the street from me is a very old man who keeps bees on nearly the same principles as my father kept them years ago—possibly he has made a very few slight improvements—and he is about 70 years old. He told me he never saw such a poor season in all his life. In the spring, when our honey-plants were ready, it rained all the time, and the bees could not do anything. Sometime in May, when fruit and blackberries were in bloom, I put on my hives about 500 one-pound sections, and the bees started off in all of them in grand shape, and I was so much encouraged; but the rain commenced, and kept up all the spring and first part of the summer, and the bees got the sections just about half full of comb, then stopped, and have done nothing since. Usually at this season of the year we have a good flow from what we call "aster-weed" here, but it seems to be very much taller than usual this season, and the bees have not done anything at all on it yet. Very soon now it will be too cool for them to do anything with it, if it does open.

I will try to keep just as many of my bees alive as possible, and see what they will do another season. I have had to feed some of them all along since July 25. My mother is living with me, and she is very old, and laughs at me for feeding bees in the summer time. She says she never heard of such a thing.

In the mountain sections of our country, which is about 75 to 100 miles above us, the bee-keepers are not as bad off as we are here, as they have taken some honey, but nothing like our average crop. Those people up there are all the old-time bee-keepers, and it is funny to see some of their honey when they bring it to market. From the looks of it, we presume they use only the box-hives, and they just cut out anything as

they come to it, and put it in a can or a bucket, and send it to market just as they come to it—white, black, pollen, young brood, and all together. If these people were "up in the business," they could make money out 'the business, as the quality of the honey coming from this locality is very fine in color and flavor.

I want to ask what I must do with the sections that are on the hives partly filled with comb. If I stack them in a dry cellar, will the combs keep, and be all right to put on again next spring? Some of the sections are full of comb, but most of them are just about half full.

F. B. EFFORD.

Winston, N. C., Sept. 12, 1892.

Friend E., you can leave the unfinished sections on the hives until it is too cool for the moth to attack them, then store them in a dry place until needed next season. Then put them on the hives and see how nicely the bees will finish them up when they get honey sufficient. They will look just about as well as those built on new starters, only the wood may be a little more time-stained, or weather-stained.

The Season, Wintering and Shading Nuclei, Etc.

Miss F. M. McKnight, of Eustabuchie, Miss., says that it has rained so much that the honey crop is almost a total failure in her locality, and that the prospect for a fall crop was by no means favorable.

Our chances for a fall crop here are very poor. We were expecting a flow from cotton bloom, but the worms came too soon for us; however, the broom-weed is yielding enough to make queen-rearing run smoothly.

1. How do you winter nuclei? I wintered a few of them in little Alley hives last winter, on the summer stands, without protection. I lost about half that I tried to winter.

2. Do you shade nuclei? If so, what kind of shades do you use? I think that shades are necessary in this hot country.

3. How many cells do you allow one large colony to build in practicing the Doolittle method of rearing queens?

4. Does your nuclei ever swarm out? If so, have you found a remedy for it?

C. B. BANKSTON.

Thorndale, Texas.

1. In the first place, I do not use the little Alley nuclei, for it is hard to keep

bees in them in summer. Yes, I often winter nuclei, but they are four frames of the Langstroth pattern, and they winter as well for me as a larger hive.

2. I hardly ever shade the hives at all, but I keep them painted well, with white lead and oil, and I usually cloud them in the manner described sometime ago in the AMERICAN BEE JOURNAL. But, in a very warm spell in July and August, it may be better to shade them. I use odds and ends of boards for shade, when I use any shade, as I do not wish to have any vines or shrubs around to be in the way.

3. I usually have about 10 to 12 cells built out by one strong colony. I find that some bees will complete twice as many good cells as others; but when I get ten good, large and long cells built out by one colony, I call it good.

4. My nuclei seldom swarm out now. If they do, my remedy is plenty of bees and honey, for if they become short of stores, and get weak in bees, they will usually swarm out, and do no good.

Getting Rid of Laying Workers.

There has of late been a good deal said about laying workers. It may be of interest to some to know my plan of getting rid of them. I have two plans, which are very simple and easy.

1st. When you find you have laying workers, let them alone until they have brood nearly ready to cap, then take a queen-cell ready to cut out, wrap some tissue paper around it (except over the cap) to protect it, then lay it under the quilt on top of the frames. Be careful to disturb the bees as little as possible.

2nd. When the brood is ready to cap, place a lively nucleus close by the side of the hive containing the laying worker, having them face the same way. Let them remain a day or two, then remove the combs from the hive, extract the honey, if any, and place the empty combs in the nucleus.

Now move the hive back a little, place the nucleus in its stead, after which carry the hive some 15 or 20 steps to the rear of the old stand, take the cover off, shake the bees on a paper or sheet, smoke them, and in a few minutes they will all return to the old stand, and unite with the nucleus, and in a few hours will be working as briskly as a new swarm.

Unless it be a good colony, it will not pay to waste time with them.

Deport, Tex.

WM. H. WHITE.



Difference in Eggs of Impregnated Queen and a Virgin.

Query 843.—1. Are the eggs in an impregnated queen different in any way from those of a virgin? 2. If not, how do you account for impure drones when these queens are mated with drones of a different race? 3. If the eggs are in a different condition, then does not the theory of parthenogenesis, as applied to queen-bees, fall to the ground?—P. R. O.

I do not know.—JAMES A. GREEN.

I leave this for Prof. Cook to tell us.—MRS. J. N. HEATER.

1. Yes, they are fertilized. 2 and 3. Too deep for me.—EUGENE SECOR.

1. No. 2. Don't know. 3. It certainly would seem so.—C. H. DIBBERN.

This question is too much for me. I am not posted, in practice.—E. FRANCE.

1. I have failed to see any difference. 2. Your queen may be impure.—H. D. CUTTING.

1. Not while in the apiary. 2. I don't account for it, neither do I believe it.—C. C. MILLER.

The drone eggs are not affected by the impregnation of the queen. If the queen is pure blooded, drones reared by her will be pure also.—MRS. L. HARRISON.

1. The worker eggs are different, being impregnated, the drone eggs are not. 2. If the drones are impure, it is because their mother is impure. 3. Bosh.—R. L. TAYLOR.

1. I am not aware that the eggs in an impregnated queen are different from those in a virgin, until the eggs are changed by contact with the impregnating fluid. This answers 2 and 3.—A. B. MASON.

Without going into detail, I would say that I consider the drones from a mis-

mated queen pure enough for all practical purposes; but for "breeding to the feather," I should want the drones to come from a queen which had mated with a drone of her own strain of "blood."—G. M. DOOLITTLE.

1. There is no difference until after they are fertilized. 2. If the queen is full-blood—pure—her drones will be pure, although she may have met an impure drone in copulation.—J. P. H. BROWN.

After they are laid they are, as they are impregnated, and will hatch workers or queens as well as drones, at the will of the bees. I don't see any "upset" to the theory of parthenogenesis.—JAMES HEDDON.

1. I think so. 3. The only part of the theory of parthenogenesis that is true is the simple fact that a laying worker or a virgin queen may lay eggs that will produce non-virile or worthless drones.—G. L. TINKER.

1. The supposition is that they are not, but are impregnated as they are laid. 2 and 3. These questions open up the whole theory of "parthenogenesis," which to-day is too well settled to allow of discussion as to its correctness.—J. E. POND.

P. R. O. cannot cause the theory of parthenogenesis to fall to the ground by any such arguments. It has withstood worse storms than this. After P. R. O. experiments a little more fully, he will find that parthenogenesis is not a theory, but a fact.—DADANT & SOX.

1. Certainly. 2. A virgin queen will produce drones (unsexed, or unfertile) without impregnation, and when fertilized she will produce perfect ones—showing a sexual connection; which answers your question. 3. They are the same eggs, under different conditions.—W. M. BARNUM.

1. If I understand the question, I would say no; while the eggs remain in the queen there is no difference. 2. I do not account for it. It has not been proved that in a case like that there are any impure drones. Science says there are not, and experience has not proved the contrary. 3. They are not in a different condition, and parthenogenesis stands.—M. MAHIN.

According to Dr. Dzierzon, they are not, but receive the fertilizing contents on its passage through the oviduct, and by the seminal sac or "spermatheca."

It seems from some provision of nature, that the drone-eggs never receive this seminal or impregnating fluid, hence the drone progeny is no blood kin to the father of the sister bees. A pure Italian queen will produce pure Italian drones, but if she be mated with a black or German drone, her female or working progeny will hybridized. Read Dadant's "Revision of Langstroth," pages 53 and 54.—J. M. HAMBAUGH.

1. No. 2. I don't account for them, as I don't think they exist. If the drones are impure, the queen was. How can any one swear that a queen is surely pure? Tainted drones show that she is not. I have tested this question very carefully, and to my full satisfaction. I will soon give an elaborate article on it for the readers of the AMERICAN BEE JOURNAL.—A. J. COOK.

1. There is no difference that I can tell by looks; but there certainly must be a difference. I will now state what I have been afraid to talk about, heretofore, viz: That a queen mating to a different race has a tendency to affect the drone as well as the worker. I may get a tongue-lashing for this, but I will tell you that my notion is that the bee-business wont run well on theory, no how.—MRS. JENNIE ATCHLEY.

1. This is getting to be a terrible question—like Bango's ghost, it won't "down." But I will give you my views on the subject. As the eggs are formed and developed in the ovary, there can be no perceivable difference whether grown in the ovaries of a fertile or unfertile queen. But all my experiments demonstrate to my intelligence, that the drone progeny of a virgin queen is *sterile*—while the drone progeny of the fertilized queen is *fertile*. Now when the virgin queen mates with the male, and her spermatheca is filled, she receives additional strength not only to produce drone progeny, but fertile drone progeny—and—and—. Please tell me how it is, or have me excused.—G. W. DEMAREE.

Your Subscription to the BEE JOURNAL—Is it paid up to date? If not, please send to us a dollar for a year, and thus show your appreciation of our efforts in your behalf. Look at your wrapper-label, and if the date looks like this—"Dec91," that \$1.00 sent to this office will make it look like this—Dec92.



Report of the Illinois State Bee-Keepers' Convention.

Written for the American Bee Journal

BY W. Z. HUTCHINSON.

(Continued from page 574.)

SECOND DAY—FORENOON SESSION.

After the address of welcome, President Hambaugh asked for criticisms upon the former report of the association, with a view to the improvement of future reports. He also called attention to the fact that somebody must look after the matter of getting a continuation of the \$500 appropriation. He showed how important it was that bee-keepers write to their members of the legislature, urging them to vote for the appropriation.

Secretary Stone said that there were still copies of the report on hand, and money with which to pay postage. If bee-keepers, or their friends, wished for them, they could be had upon application.

S. N. Black said that a member of the Legislature almost sneered at him when he asked him to vote for the appropriation bill. He (Black) went home and wrote to him and several other members, long letters explaining matters. They were surprised at what they learned, and very willingly voted for the bill.

J. M. Hambaugh advised working in conjunction with the horticulturists.

J. A. Green—I approve of the views of Mr. Hambaugh, and would suggest that a copy of our report be sent to each member.

President Hambaugh said there was no danger but what the horticulturists, at least some of them, needed educating in apicultural matters. At a farmer's institute he had been put upon the programme for a talk upon bees. In the course of his remarks he alluded to the value of bees in fertilizing blossoms. Some were astonished, and one man was inclined to take issue with him.

Frank Benton suggested the getting from each county a list of the honey-

producing flora of that locality. From these reports could be made a sort of floral map of the whole State. An inquiry in regard to the honey-producing value of any part of the State could be easily answered.

In regard to affiliation with other associations, Mr. Benton thought it a good thing. He would have the small associations within the State affiliate with the State association, and the State association with the North American. He would have each association send a delegate from each State association, and the result would be that the attendance at the North American would always be sufficient to secure reduced rates.

J. H. Larrabee had been gathering statistics from the whole United States in regard to the honey-producing resources of different localities, and getting up a map something like that suggested by Mr. Benton.

Request of the Illinois Experiment Station.

Mr. Thomas G. Newman offered the following resolution, which was adopted:

Resolved, That a committee of three be appointed to submit resolutions on the subject of our obtaining recognition from the Director of the Experiment Station of Illinois, and to ask for a share of the appropriation of the \$15,000 from the general government for experimental purposes.

By vote, it was decided that Mr. J. A. Green should be the man that should be recommended for the position.

Adulterators of Honey.

Mr. M. H. Mandelbaum offered the following resolution:

Resolved, That this convention recommend to the publishers of the various bee-papers that they secure an affidavit or contract from all the firms quoting honey in their honey column, that they will not sell adulterated honey or bees-wax, they knowing it to be such.

J. A. Green thought it scarcely a business thing. A firm that would adulterate honey would not hesitate to furnish a false affidavit.

Mr. Mandelbaum—You get the publishers to get such affidavits from dealers who quote in their columns, and if they continue to adulterate, our firm will attend to them.

Thomas G. Newman—It is possible that Mr. Mandelbaum has struck a scheme whereby we can reach the adulterators.

The resolution was adopted, and W. Z. Hutchinson instructed to bring the same matter before the North American at its next meeting.

Mrs. L. Harrison, of Peoria, Ills., read the following essay upon

The Most Important Function of the Honey-Bee.

What is the most important function of the honey-bee—the production of honey and wax or the fertilization of flowers?

In the account of the creation, as given in the book of Genesis, the command was to multiply and replenish the earth, and that every plant should bring forth seed after its kind. There is harmony in nature, and there is always an appointed means to accomplish a desired end. Plants cannot walk like animate nature, therefore there must be a foreign agent to carry a message from one to another.

In some families of plants, as the grasses, cereals, palms, and of our forest trees, the lone missiles are carried by the wind, and many times for great distances.

In other families of plants, insects are the appointed agents to perfect this union. In California the Smyrna figs do not bear fruit, because their fertilizing agent has not been imported. Neither does *Dicentra spectabilis*—that beautiful flower so much admired—bear seed, for its moth has never been brought from China, its native habitat.

Since the time Adam and Eve dwelt in the garden of Eden, the honey-bee has been his companion and co-worker, as the special agent for the fertilization of cultivated crops. When this continent was discovered, there were no honey-bees, for the wild flowers and grasses did not need their agency; but when the white man came, bringing his little fruit trees and seeds with him, then "the white man's fly" appeared. There were a few insects that fertilized the bloom of wild apples and plums, but they were few and far between.

During the blooming of the fruit trees, if there are no honey-bees, there will be but little fruit set. This was exemplified the past season, for during its bloom there were long-continued rains which washed off the pollen, and confined the bees to their hives.

CLOVERS (*Trifolium*).

This is a family of plants of such great value to farmers and to the people at large, that their worth cannot be over-

estimated, for he who has grass has meat; and he who has clover, has milk and honey. Clover makes an excellent pasture, and good hay, and one of the best fertilizers known, when plowed under in its green state. Mr. T. B. Terry, the great potato man of Ohio, enriches his fields by plowing under clover, and in this way obtains no seeds of noxious weeds. There are forty different kinds of clovers in this country, many of them to be found on the Pacific coast.

RED CLOVER (*Trifolium Pratense*).

This is the most valuable for soiling purposes of all the clovers, and is not dependent upon honey-bees for its fertilization, but upon bumble-bees (*Bombus*), as its tube-like corollas are too long and narrow for the bees to reach the nectar, where it is grown upon rich lands. If from any reason, either by drouth or poor soil, the heads are small, and the tube-like corollas short, the bees are able to reach the nectar, and the progeny of some queens have also a longer proboscis.

I would like to put in a plea for the poor, abused bumble-bees. The Austrians discovered that no seed matured upon red clover, and imported bumble-bees, when they could grow seed in abundance. Notwithstanding their good service to farmers, they make war upon them continually, destroying their nests. Would it not be better to cover their entrances to their nests with screens, confining them in while workmen and horses are near, than destroying them? The first crop of red clover bears but little seed, for this reason, that there are so few bumble-bees early in the season, as only the queen survives the winter.

ALSIKE CLOVER (*Trifolium Hybrida*) AND WHITE CLOVER (*Trifolium Repens*).

Alsike clover is a first cousin to both white and red clover, and resembles them both. It yields more nectar than white clover, and is preferred by the bees. The first crop yields seed, and has the ability of taking care of itself, by re-seeding.

By cutting Alsike clover, just as it comes into bloom, it will then bloom in August, which will fill the interregnum between white clover and fall flowers.

The praises of white clover have been so aptly sung, that I do not feel able to add anything thereto. For these clovers, we are indebted to the honey-bees, for they would be rare plants with only an

occasional specimen, if the bees did not fertilize the bloom.

SWEET CLOVER (*Mellilotus Alba*, *Mellilotus Officinalis*).

I do not think that the good qualities of these plants are known and appreciated as their merits demand. It is a biennial, growing in poor, rough, gravelly lands, adding to their fertility, and preventing washing. It adds a sweet perfume to hay when mowed away with it, and animals learn to relish it. It shows itself so early in the spring before other clovers, and is greedily devoured by fowls, and furnishes bee-pasture from June until frost.

HONEY AND WAX.

"My son, eat thou honey, because it is good," was uttered many centuries ago, by one of the wisest of men, and is just as good food now, as in the past. Chemists cannot manufacture it; Nature has her own laboratories in the corollas of flowers, and how it is distilled is one of her own secrets.

Honey is not only good for food, but is used by the *Materia medica* for the alleviation of ills which the flesh is heir to, as well as the sting of the bee, which is a powerful antidote for the alleviation of distress.

Chemists cannot manufacture wax—it is the secretion of the honey-bee, and is used in many ways in the arts and sciences.

After a careful revision of the functions of the honey-bee, the most useful to the world at large, is the fertilization of plants, and the bees should be the necessary adjunct of every country home.

MRS. L. HARRISON.

J. H. Larrabee—I notice that Mrs. Harrison's essay says that cattle learn to like sweet clover, and I think she is correct about the matter. I think they do not like it until they learn to like it. At the college we made some silage from sweet clover, and a horse that had been accustomed to silage ate it quite readily, while some cattle not accustomed to silage would not touch it.

S. N. Black said that sweet clover would live several years if not allowed to go to seed. He had not been successful in getting it to grow.

J. A. Green advised the setting out of small plants. If they thrive it would show that the conditions were adapted to its growth.

J. H. Larrabee—At the college we sowed some on both sand and clay. That on the sand died from the drouth when it was about two inches high. That on the clay lived and did well. This year it was so rank that a man would pass through it only with difficulty. I have never been able to secure any honey that I would pronounce pure sweet clover, but have had the bees get enough honey from sweet clover so that they would not rob.

J. A. Green had secured honey that was so clearly sweet clover that the sweet clover odor and taste were plainly discernable.

Mrs. N. L. Stow, of South Evanston, Ills., then read the following essay on

The Outlook for Apiculture.

The bee-keepers of Illinois are to be congratulated that they are represented by an organization that has started out with such flying colors—I was going to say, referring to that splendid piece of work, "The First Annual Report of the Illinois State Bee-Keepers' Association," but I will amend that, as there is nothing of show, or brag about it, but solid, practical work, that shows that the first association was made up of men well fitted to represent our industry in this grand State of Illinois, and that they have brains and wit enough to carry out any projects that will benefit, advance, or protect our interests.

But what of the industry itself? Will it prove worthy of its advocates, in face of three or four years of almost failure? Bee-keepers as a class are optimists, but "hope deferred maketh the heart sick." Will men advocate specialty now, as they did a few years ago? I think not. Monopoly is the great cry of the day in the business world, but, thank God, here we have something that cannot be monopolized any more than sunshine, fresh air and beauty, and all of God's best gifts to man. It is true they can be perverted, polluted, and adulterated, but honey is shed around us like the dew—Nature's own product any one may gather and eat—if they will only keep bees, and the season is propitious.

The time has been, doubtless, and may be now, in some favored localities, where large apiaries may be carried on successfully, but as our State becomes more and more densely populated they will be more restricted. Our cities and towns are growing larger, and the land outside of them is being used for market gardens to supply the inhabitants with vegetables. Our natural forests are

being cut down to make room for more towns or farms, and even our swamps and marshy lands are being drained and cultivated, and land is land, and must be made to yield something to enrich its owner. No more weeds in the fence corners!

With two such cities as Chicago and St. Louis to feed, our State must become more and more a garden State. What, then, is the remedy and hope for apiculture? It is with the farmers, horticulturists, and small bee-keepers; let them make bee-keeping a part of their stock in trade, not as a "side-issue," to run itself if it can, but with intelligence, improved methods, and the right care at the right time.

But it might be said that swarming, putting on sections and taking off, comes just when a farmer is the busiest. Then let him do what has been done with marked success in many instances—bring out his wife, or daughters, to help him. Let them have more help in the kitchen, and they will, when once they are educated up to it, be glad to make the change. It is for this reason I have consented to fill this place to-day.

My experience proves to me that women can be valuable helps in the apiary, and, if they choose, can carry on the work alone, but as there is much lifting, and hard work about it, I would have them fitted to take charge of the work, or "boss" it, and call in help when needed. Let them see what a perfect piece of art a section of comb honey may be, and they will be enthusiastic to produce something like. Let them have bee-literature with the mutual benefit of exchange of notes and ideas, and *most especially an interest in the profits*, and instead of the complaint that farmers and small bee-keepers break down prices, the State will soon depend upon them for its honey.

So, then, it may be that the great underlying hope of this most honorable industry, as of much that is good in the world, rests in our women. Give them a chance.

Mrs. N. L. Stow.

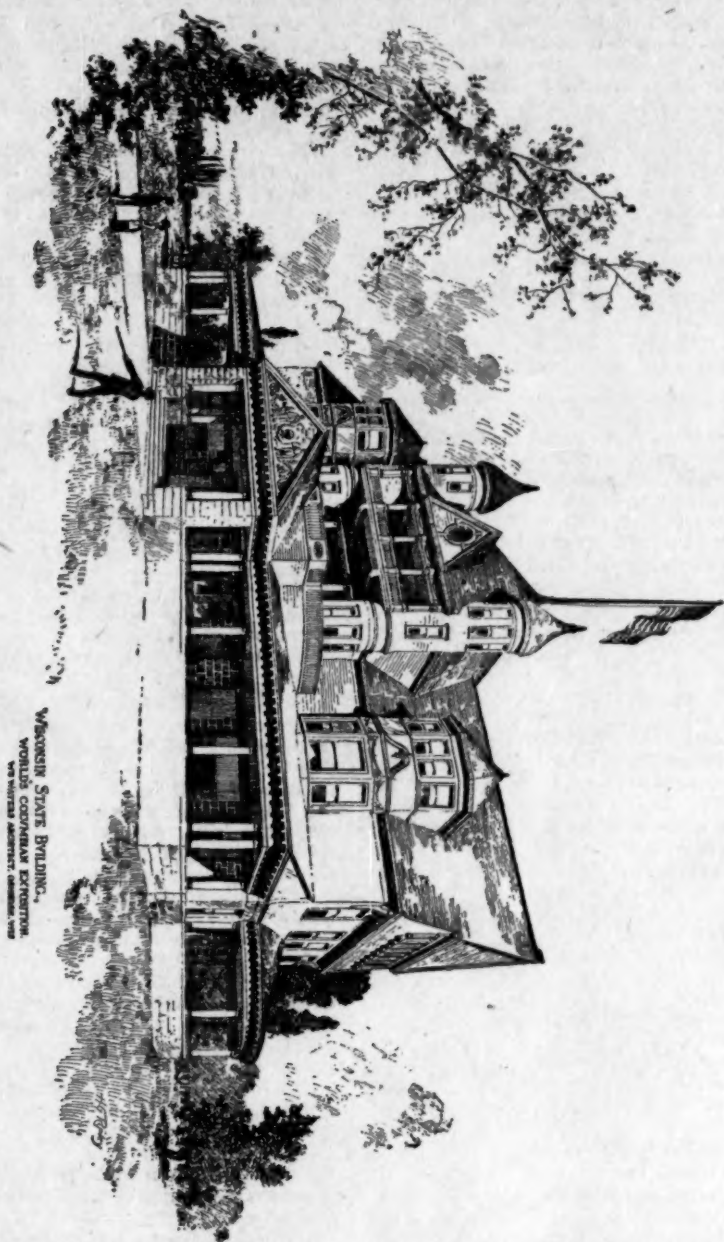
(Concluded next week.)

Report of the Colorado State Bee-Keepers' Convention.

Compiled from Newspaper Reports.

The Colorado State Bee-Keepers' Convention met in Longmont, Colo., on Sept. 28, 1892.

President E. B. Porter, of Longmont, called the convention to order. Prayer



WISCONSIN STATE BUILDING,
WORLD'S COLUMBIAN EXPOSITION,
SAN FRANCISCO, CALIFORNIA, 1906

was offered by Rev. A. B. Thompson, after which Mr. R. F. Coffin, who was down on the programme for an address of welcome, excused himself and introduced Hon. B. L. Carr, who made a

brief address, extending the hospitalities of the city to the association. Mr. F. O. Blair, of the *Trinidad News*, responded. A musical selection was then rendered by Miss Booth and Mr. Knight, commit-

tees on award appointed, and the association adjourned to enjoy a most excellent spread of biscuit and honey and coffee, prepared by the Northern Bee-Keepers' Association.

At the afternoon session the following essays were read: "World's Fair Exhibit," E. Milesen, Denver; "Brood-Frames," S. M. Carlzen, Montclair; "Some of My Experience," Mrs. McDaniel, Arvada; "Comb Foundation," Walter Martin, Broomfield; "Foul Brood," by five county inspectors.

The display of honey was not large, but exceedingly attractive. That made by Mr. R. F. Coffin was the most noticeable, and was universally admired. It showed honey in every form, and the comb in many curious and fantastic shapes, the entire display being flanked by two great jars of milk, and the whole being suggestive of the fact that the country is overflowing with "milk and honey," as in truth it is.

THE BEE-INDUSTRY IN COLORADO.

Very few people in Colorado appreciate the extent to which the honey industry has grown. The first colony of bees was brought to Colorado in 1860, by Isaac McBroom, of Bear Creek, and the second by ex-Gov. Hunt, in 1866. Both colonies died soon after being brought here. In 1870 a carload of bees was brought to Denver, which brought \$25 a colony. From this dates the beginning of the industry in the State. It did not really thrive, however, until the large sowings of alfalfa and clover began, and now Colorado is rapidly taking rank as a leading honey-producing State.

The State Association was organized in 1880, by J. L. Peabody, E. Milesen and Mrs. Olive Wright. At that time there were not to exceed 250 colonies in the State. In 1888 the Association was incorporated. In 1890 the Uncompahgre Valley Association was organized at Montrose, and in 1891 the Northern Colorado Association, at Longmont, was formed. The latter now numbers 73 members.

The second day's session opened with an increased attendance. Professor C. P. Gillette, of the State Agricultural College, spoke at length the previous night in regard to foul brood, illustrating his lecture with charts and microscopic specimens of the bacillus or microbe that is the cause of this disease. His paper was one of great value to the bee-keepers, and the association decided to have it published and sent to the

absent members. After the Professor's address the newspaper reports that the honey crop of the past season was an average crop were severely criticised by a number of speakers, who placed the crop at one-third or one-fourth of the average.

This morning's session was devoted to the discussion of essays, prominent among which were "The Cause of Failure in Honey Crops," by D. L. Tracey, Ni-Wot; "Agricultural Notes," by Mrs. M. M. White, of Broomfield; "Bee-Hives" by E. B. Porter, of Longmont; "Bees for Money," by R. C. Aiken, of Loveland; and "The Honey Market," by Charles Adams, of Greeley.

At the afternoon session G. C. Miller gave an interesting bee-talk.

The committee of awards were as follows:

Honey—V. Devinney, A. D. Stryker, Dr. Cussman. Implements—A. Beeson, R. H. Rhodes, R. F. Coffin.

Secretary Knight's report showed that there are 64,000 colonies of bees in Colorado, Boulder county having 18,000. This year's honey crop is 1,760,000 pounds, which, at an average of 11 cents, will net \$193,600. About \$320,000 is invested in the industry.

NEW CURE FOR BEE-STINGS.

In a conversation with J. B. Adams, the Boulder county bee-inspector, he detailed a new cure for bee-stings that relieves the pain instantly. The inspector uses a disinfectant solution of a one three-hundredth part carbolic acid mixture to each pint of water, to which is added a table-spoonful of salt. Accidentally punching the business end of a bee, and feeling pretty warm when the bee sat down on him, he thought to cool the spot by applying some of his disinfectant solution, when, to his astonishment, every particle of pain left him. He has used it frequently since then, and it has proven successful in every case.

The following is the list of awards:

Section press—S. M. Carlson, E. B. Porter. Hive—Aiken Booth. Implements—A. M. Preston. Veil—R. H. Rhodes; ridiculous veil—A. M. Preston. Bee-escape—Aiken Booth. Queen-cage F. Ranchfuss. Comb honey—Walter Martin, Mrs. Booth. Extracted—R. F. Coffin, Aiken Booth. Largest display—J. B. Adams. Silver Medal—A. M. Preston. Ten sections—Mrs. Booth, Mrs. Plum. Observatory hive with bees—J. B. Adams. Artistic display—R. F. Coffin.

Report of the Capital Bee-Keepers' Convention.

Written for the American Bee Journal

BY C. E. YOCOM.

The Capital Bee-Keepers' Association met at Springfield, Ills., Oct. 4, 1892. The convention was called to order by the President, P. J. England, and the regular order of business was attended to. This being the day for election of officers, James A. Stone moved that the present officers be continued for another year, which motion was carried.

For some unaccountable reason, those who were to prepare essays to be read, were absent, but although there was not so large an attendance as was expected, some interesting matter was discussed, and a general good time was had.

PACKAGES FOR RETAILING EXTRACTED HONEY.

The question, "What is the best package for retailing extracted honey on the regular market," was asked. The subject was discussed by the President, James A. Stone, Geo. F. Robbins, Wm. J. Conkling, and the Secretary, all of whom recommended small packages holding one pound, and not more than two pounds each.

Messrs. Conkling and Robbins each exhibited a bee-feeder, both of which possessed features of merit.

The Executive Committee was instructed to call another meeting of the Association in four to six weeks from date.

The convention then adjourned.

Sherman, Ills. C. E. YOCOM, Sec.

Extra Eight Pages were added to No. 17 to accommodate a few premium pages. Look at every page and see if we do not offer something that you want. It will pay you to get some new subscribers for the BEE JOURNAL, and secure one or more of the premiums.

Doolittle's Queen-Rearing

book should be in the library of every bee-keeper; and in the way we offer it on page 589, there is no reason now why every one may not possess a copy of it. Send us one new subscriber for a year, and we will mail the book to you as a present



Formic Acid—Its Origin, Uses and Effects.

Written for the American Bee Journal

BY C. J. ROBINSON.

In the sting of the bee, wasp, hornet, etc., a minute drop of a transparent liquid may be observed on the sting, and is called "bee poison" (formic acid). It penetrates the wound by the sting, and causes the well-known effects. As will be seen further on, it would be a great mistake to assume that the only object of this is to increase the effects of the sting, that is, that it serves only to injure. It has a far more important purpose, namely, to prevent fermentation and decomposition.

The celebrated bee-master, Holz, reported in his long experience with honey that which came from "rancorous swarms" (cross bees), had peculiar properties. It always had a harsh taste, and its smell was more or less like stinging-venom. How can the character of the swarm affect the smell and taste of honey?

We do know this much—when bees are disturbed, they run out their stings, on the point of which may be seen a tiny drop. This little drop, as we have mentioned, is bee-poison, or true formic acid. When the disturbance is over with, they draw in their stings, but the little drop of liquid does not go back with it, but is wiped off by the comb, and eventually gets mixed with the honey. This explains how honey from overly cross bees must taste and smell sharper than from peaceable bees.

Excitable bees will rub off this little drop of formic acid more frequently than other bees; perhaps a larger drop is formed by nervous bees than by those not nervous in so high a degree, and thus it is that honey from nervous colonies, that have been often disturbed, is surcharged with formic acid.

This acid is never absent in genuine honey, but the amount differs, as before

indicated. This contamination with formic acid is, in certain respects, harmful as a dietetic, but highly useful—in fact, necessary not in excess, for it keeps the honey from fermenting as it does when diluted with water, or gathers damp.

We all know indeed, that honey treated with any process called "purifying," from which the formic acid has been removed, very soon ferments, while real honey, properly cared for, will keep unchanged for years. Nature duly arranged the matter, and inspired bees with the knowledge instinctively, and therefore they do not carry this drop of formic acid out of the hive. Bees always add the acid to nectar they collect, for the purpose of preventing fermentation. Nectar, as it is when first gathered by bees, is more or less watery, and would readily begin to ferment while in a temperature maintained in a hive were not bees provided with the faculty of secreting the non-fermentative formic acid.

Here I record my discovery of what I know to be a fact in Nature, well knowing, too, that none will believe my assertion or doctrine at present, with the superstition (believing without evidence) that exists by false notions. My assertion is this:

Pure honey, while in comb-cells, never is—never was—charged with foul brood virus, nor has such honey ever been the medium of conveying the foul brood virus from one hive to others. Of course I will be disputed in this, candidly, by most, if not all, other writers. Belief without evidence, is very common, and leads us into mistakes.

Some twelve years ago I set forth in an essay on foul brood that it is a "germ disease." The essay was read in convention, and Mr. D. A. Jones promptly responded thus by way of comment: "I don't believe foul brood is a germ disease."

Later, the report of the Northeastern Bee-Keepers' Association held at Syracuse, N. Y., on Jan. 9 to 11, 1883, records Mr. Jones as saying while discussing the subject of foul brood: "I do not believe there is such a thing as a parasite or living germ in foul brood. There are certainly two kinds of foul brood." This idea was entertained by most bee-keepers at that time. Later still, after Mr. Cheshire's announcement of bacteria in foul brood, Mr. Jones and other skeptics shouted "foul brood germs." Much more can yet be learned concerning foul brood.

Formic acid, or so-called "bee-poison,"

is a powerful antiseptic that kills the germs or renders them powerless to do injury, and those who have had experience with foul brood have observed that the disease does not make much headway in large colonies during active honey-gathering—the time bees are making use of large quantities of formic acid.

BEE-STINGS AND RHEUMATISM.

Bee-stings are often spoken of in current literature as a remedy for rheumatic affection, and numerous cures are adduced to prove it. If the formic acid can be looked upon as the principal agent in the cure, it would be worth while to try the experiment of rubbing the troubled spot with this acid, or injecting it under the skin by means of hypodermic syringe, so as to avoid the inconvenient method of applying live bees. Formate of ammonia (formic acid and ammonia) is a drug used by physicians in treating cases of nervous troubles, particularly of the head when not inflammatory.

WHAT IS FORMIC ACID?

Two hundred years ago formic acid was obtained from the brown wood ants, by triturating them with water, and then distilling it. The same might be done with honey-bees. The acid liquor was used to irritate the skin as a counter irritant. The reddening of the skin, when using baths of pine leaves, is also due to the action of formic acid present in the leaves. The formic acid of commerce is formed by artificial distillation.

As regards the irritating action of stinging nettles and other similar plants, it depends, as already stated, upon its formic acid. The point of the nettle is as brittle as glass, and by the slightest touch penetrates the skin and breaks off, pouring out its acid and causing the burning sensation.

Some species of caterpillars have formic acid in some of their hairs, which they seem to be able to shake at will, and when a person touches such a caterpillar, the poison penetrates the skin wherever it is moist, and causes burning, itching and inflammation. These poisonous members preserve their irritating powers even after the death of the worm. This accounts for reliable statements that visitors to collections of caterpillars have suffered from exanthematus eruption on the neck.

Many hairy caterpillars cause itching and burning of the skin when touched, and sometimes it gives rise to swelling

and redness. This depends upon the fine hairs, which produce the same effect when they float around in the air. Many ladies who visited the caterpillar room of the naturalist Reaumer (the apiarist), had a breaking out on the neck.

Formic acid, according to the United States Dispensary, diluted with an equal measure of water, is an excellent application to paralyzed limbs, exciting the circulation of the blood and producing exunt erythemathous redness, with a prickly sensation as if stung with bees or nettles.

Formate of ammonia has a specific tendency to the nervous centers, and is contraindicated in cases of any active irritation or inflammation of the nervous centers or about them. Those who handle bees should understand whether or not they are afflicted with chronic head or heart trouble, because such persons cannot safely expose themselves to any large doses of sting virus with impunity. But in cases of paralyzed limbs, or paralysis not complicated with head or heart disease, stinging may prove beneficial.

In conclusion, I mention that formic acid gets its name from the ant (*formica*), because it was first found in the ant. If it had been found first in the bee, or in the nettle, it would have some other name. If an ant runs over a piece of blue paper, it will leave a red mark. Put a stick in an ant-hill, and they will squirt strong formic acid on it.

Prof. August Vogel, of Munich, wrote on the subject of formic acid more than a decade ago.

Richford, N. Y.

Points on Removing Honey from the Hives, and Marketing.

Besides knowing how to manage bees, hives, and treat the honey, the bee-keeper must know how to get the most profit from his bees. It is one thing to produce a crop of honey, but quite another thing to sell it. The progressive bee-keeper of to-day must be posted in regard to the markets and manner of putting his honey on the market, as well as the more modern methods of producing it, if he would make bee-keeping as profitable as it should be.

There are two things that tend to, and do, depress the honey market, which can and should be avoided. First, the great bulk of honey that is put on the market in poor shape. We must

have our honey put up in small sections, and in the most attractive style.

In order to have it thus, it is important to attend to it properly just as soon as the harvest is over, and get at least a part of it on the early market, as it always commands a better price than later in the season. Take the honey from the hives as soon as the main white honey season is over, and place it in a warm room with the temperature at 95° or 100°, and it will ripen just as well as if left in the hive. If left in the hive until late in the season, the bees begin to prepare for winter by filling every crevice and opening with propolis. The sections become travel-stained, and the honey gets dark, and no amount of work will make it as attractive as it otherwise would have been if taken from the hive as soon as the harvest was over.

The sections should be thoroughly cleaned, and labeled or stamped with the producer's name on them, and crated in neat crates with glass fronts, so it will present a nice appearance. Such a crate of honey is bound to sell at a good price.

Second, the lack of knowledge in regard to the price in the different markets. The latter is more prevalent among farmers and small producers. Many farmers will go to market and take just about what the merchant chooses to give them, when with a reasonable knowledge of the markets and demand, they could in many cases get much more for their goods. This not only does them an injury, but all the rest of the people who are engaged in the same occupation.

Always sell it in the home market if possible. It is risky to ship. Honey is an excellent article to retail. The retailers will not pay as much as they will to commission houses, besides freight, drayage, and the risk in shipping. If you have honey to sell, watch these points.—*Field and Farm*.

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Don't Fail to read all of page 611.



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Egg-Eating Dogs—Not Much Surplus.

For the benefit of Dr. Hachenberg (see page 538) and others, I will give from experience a sure cure to break a dog from sucking eggs. Grease an egg with hog lard, and put equal parts of turpentine and croton oil on the egg, and put it where the dog can find it.

Our honey-flow comes mostly in September. It was so dry that we did not get much surplus. Bees have plenty of honey to winter on.

A. J. RICH.

Kenesaw, Nebr., Oct. 24, 1892.

Bees Well Supplied for Winter.

My bees have not done very well this season. Last fall I put into the cellar 24 colonies, and took out 23 alive in the spring, but they dwindled to 10 by the time they could get enough to live on and multiply, so this fall I have 20 strong colonies, and will have some 300 pounds of comb honey, more than half of which was gathered in September from heart's-ease. They are well supplied for winter. I have 3 colonies of Carno-Italians, and the rest are Italians.

D. C. WILSON.

Viola, Iowa, Oct. 21, 1892.

Wheat Turning to Chess—Challenge.

On page 538 of the last issue of the "Old Reliable," I notice that Mr. G. B. Replogle speaks of my last article as being "mythical," and on the line of "guessing." I will here say that all I have said about drones is actual experience, and no "myth" about it. I do not pretend to know everything about bees—if I did, I should feel sad to think there was nothing more for me to learn.

With reference to going to Ames, Iowa, I may frankly say that I am hardly ready to go over there and re-

main until harvest next summer, for the paltry sum of \$25. Any agriculturist, bee-keeper or gardener who may be skeptical with reference to wheat ever changing to chess, can try the following experiment:

Construct a tank 10 feet square and 2 feet deep; fill the tank to the depth of 18 inches, with soil such as will be found in a thickly timbered forest where beech, sugar and elm wood grow. Prairie soil will not do. Select the soil where no tame plant has ever grown. Plant a single kernel or grain of wheat every foot apart, and keep the wheat perfectly clean. As soon as the wheat begins to stem, or stalk, fill the tank with cold water so as to almost keep the wheat covered with water. Once or twice a week the water can be turned off, and the tank refilled with fresh water. Some care must be taken so as not to keep the wheat wet enough for so great a length of time as to kill it. When the stalks are nearly heading, keep all water off, and see what you have produced, wheat or cheat. If the season be late, bunches of wheat may be transplanted from some field.

The above has reference to winter wheat.

W. P. FAYLOR.

La Porte, Iowa.

Overwhelming Testimony for Italians.

The Illinois State Bee-Keepers' Association has issued its first "annual report," and in answer to question 22 of Secretary Stone, "What strains or strain of bees have you? and which do you prefer?" sixty-five answers have been published. One prefers Cyprians; two, black bees; while 62 out of the 65 prefer Italians or their crosses. To be sure, there are a few Italian queen-breeders who answer, and as a Justice of the Peace I do not consider their testimony as free from selfishness, yet it might be truthful. But nearly all who have answered are honey-producers only so far as apiculture is concerned; but what an overwhelming testimony is there in favor of the blood of the Italian bee!

JAMES HAMILTON.

Beason, Ills.

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but what can secure at least one new subscriber to the BEE JOURNAL, and get the splendid Premium offered on page 611. Try it.



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Wallace Porter Dec92
Suffield, Portage co, Ohio

CONVENTION DIRECTORY.*Time and place of meeting.*

1892.
Nov. 17-19.—Missouri State, at Independence.
W. S. Dorn Blaser, Sec., Higginsville, Mo.
Nov. 28.—Allegany Co., at Angelica, N. Y.
H. L. Dwight, Sec., Friendship, N. Y.
Dec. 14, 15.—Eastern Iowa, at Maquoketa.
Frank Coverdale, Sec., Welton, Iowa.
1893.
Jan. 13, 14.—S.W. Wisconsin, at Boscobel, Wis.
Edwin Pike, Pres., Boscobel, Wis.

In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITORS.

North American Bee-Keepers' Association

PRESIDENT—Eugene Secor..Forest City, Iowa.
SECRETARY—W. Z. Hutchinson....Flint, Mich

National Bee-Keepers' Union.

PRESIDENT—James Heddon ..Dowagiac, Mich.
SEC'Y AND MANAGER—T. G. Newman, Chicago.

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Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line**, for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

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6Atf Wallaceburg, Arkansas

Honey & Beeswax Market Quotations.

The following Quotations are for Saturday, October 2nd, 1892:

CHICAGO, ILL.—Demand for comb honey is quite good, and choice lots bring 18c., others in proportion. Extracted, 6@9c., according to what it is—sales chiefly at 8@9c.
Beeswax—23@25c. R. A. B.

CHICAGO, ILL.—No. 1 comb honey, 16@17 cts. White extracted, 7½@8c.; dark, 6½@7c. Beeswax—24@25c. J. A. L.

CHICAGO, ILL.—Fancy white comb honey is selling at 17@18c.; second grade, 15@16c. Extracted honey, 7@8½c. Beeswax—26c. All the foregoing are scarce on our market, and in good demand. S. T. F. & C.

KANSAS CITY, Mo.—Receipts and stocks very light, demand good. We quote: No. 1 white 1-lbs. 16@17c.; No. 2, 14@15c.; No. 1 amber 1-lbs. 15c.; No. 2 amber, 10@12c. Extracted, white, 7@7½c.; amber, 5@6. Beeswax—20@23c. C-M. C. C.

CINCINNATI, OHIO.—Demand good for all kinds of extracted honey at 5½@8c., according to quality. Arrivals not equal to demand. We dare not solicit new trade. Comb honey is scarce, at 15@16c. for best white.
Beeswax—Demand fair, at 20@25c. for good to choice yellow. Supply good. C. F. M. & S.

SAN FRANCISCO, CALIF.—Choice extracted is scarce at 7@7½c., and demand heavier than supply. Choice comb is not scarce at 10@12c., according to quality, 1-lbs. Beeswax is neglected at 22@23c. S., L. & S.

BOSTON, MASS.—Supply is very light. We are selling best White 1-lbs. at 18@19c. Extracted, 7@9c. B. & K.

MINNEAPOLIS, MINN.—Market good and new crop is arriving, but mostly dark is being marketed. Fancy white clover 1-lbs. sell fast at 18c.; 2-lbs. 16@17c. Buckwheat, comb, 13@14c. Extracted, in barrels, 7@8c.; in 5 or 10 lb. kegs., 9@10c. J. A. S. & C.

MINNEAPOLIS, MINN.—No. 1 white 1-lbs., 18c.; No. 2, 16@17c. No. 1 dark 1-lbs., 13@14 cts.; No. 2, 12½c. Old honey 2c. to 3c. per lb. lower. New extracted (not candied), white, 8@9c.; dark, 6@7c. Old extracted (candied) slow sale at 2 to 3c. lower per lb. S. & E.

NEW YORK, N. Y.—Comb is arriving freely, and demand is good. Fancy white 1-lbs. 15@17c.; 2-lbs. 13@14c. Fair white 1-lbs., 13@14c.; 2-lbs. 12c. Buckwheat 1-lbs. 11@12 2-lbs. 10c. Extracted—clover, basswood, and orange bloom, 7½@8c. Southern, 65@75c. a gallon. Beeswax—26@27c. H. B. & S.

ALBANY, N. Y.—Honey more plenty and market some lower on all grades except white comb, which sells at 15@17c.; mixed, 13@14c. dark, 10@11c. Extracted, white, 7½@8½c.; amber, 7@7½c.; dark, 6½@7c. Beeswax, 27@28c. H. R. W.

NEW YORK, N. Y.—Demand is moderate, and supply reduced, with no more glassed 1-lb. nor paper cartons, 1-lb. We quote: Comb, 1-lb., 14@15c. Extracted—Basswood, 7½@7¾c.; buckwheat, 5½@6¼c.; Mangrove, 68@75c. per gal. Good demand for dark extracted honey. Beeswax, in fair supply, with small demand, at 26@27c. F. G. S. & C.

KANSAS CITY, Mo.—Demand good, supply very light. White 1-lbs., 16c. Extracted, 6@7c. New crop is arriving and is very fine. No Beeswax on the market. H. & B.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

R. A. BURNETT, 161 South Water Street.
J. A. LAMON, 44 & 46 South Water Street

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN,
28 & 30 West Broadway

San Francisco, Calif.

SCHACHT, LEMCKE & STEINER, 10 Drumm St.

Minneapolis, Minn.

STEWART & ELLIOTT, 22 Bridge Square.
J. A. SHEA & CO., 14 & 16 Hennepin Avenue.

Kansas City, Mo.

HAMBLIN & BEARSS, 514 Walnut Street.
CLEMONS-MASON COM. CO., 521 Walnut St.

Albany, N. Y.

H. R. WRIGHT, 326 & 328 Broadway.

Hamilton, Ills.

CHAS. DADANT & SON.

Cincinnati Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

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